

### **ABSTRACT**

Shift performance of a powertrain system of a hybrid electric vehicle is enhanced by a powertrain system including a clutch, a primary motor, an automated shift gearbox (ASG) connected to the engine interposing the clutch, a secondary motor; and a differential gearbox, wherein the primary motor is disposed between an output shaft of the clutch and an input shaft of the ASG, and the secondary motor is disposed between an output shaft of the ASG and an input shaft of the differential gearbox.

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